

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 10412 - L2 Version 4  
Chandra X-Ray Center

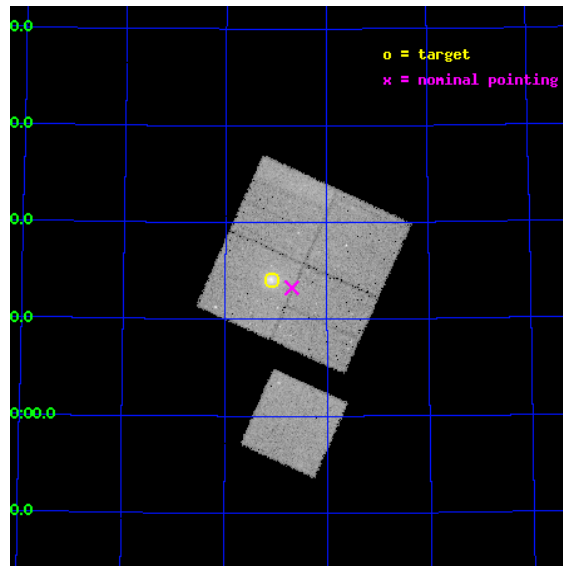
L2 Processing Date : Jun 11 2012

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# 1 Front

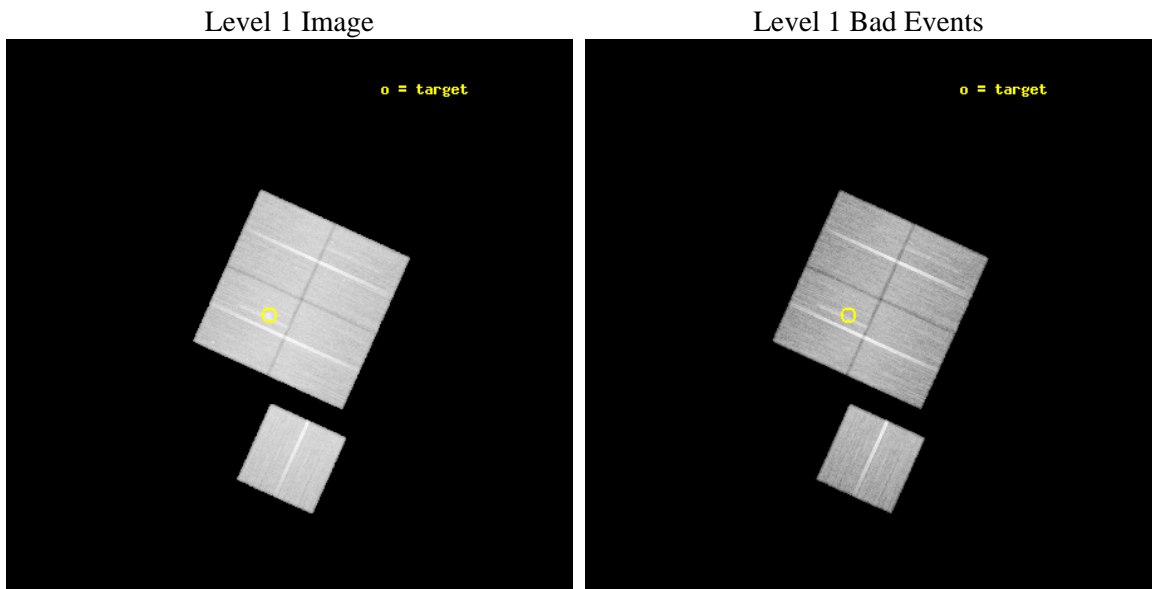
seq_num	800773	Sequence number
obs_id	10412	Observation id
title	The X-ray gaseous environment of dying radio sources	Proposal titl
observer	Dr Matteo Murgia	Principal investigator
object	ZwCl 1829.3+6912	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	277.27125	Observer's specified target RA [deg]
dec_targ	69.235028	Observer's specified target Dec [deg]
ra_nom	277.17213646737	Nominal RA [deg]
dec_nom	69.221246766767	Nominal Dec [deg]
roll_nom	204.30136325293	Nominal Roll [deg]
revision	4	Processing version of data
ontime	35035.284920871	Sum of GTIs [s]
livetime	34577.523130779	Livetime [s]
ontime0	35038.302771151	Sum of GTIs [s]
ontime1	35038.343811154	Sum of GTIs [s]
ontime2	35028.961870313	Sum of GTIs [s]
ontime3	35035.284920871	Sum of GTIs [s]
ontime6	35038.261731148	Sum of GTIs [s]
l2events	138441	Number of level 2 events



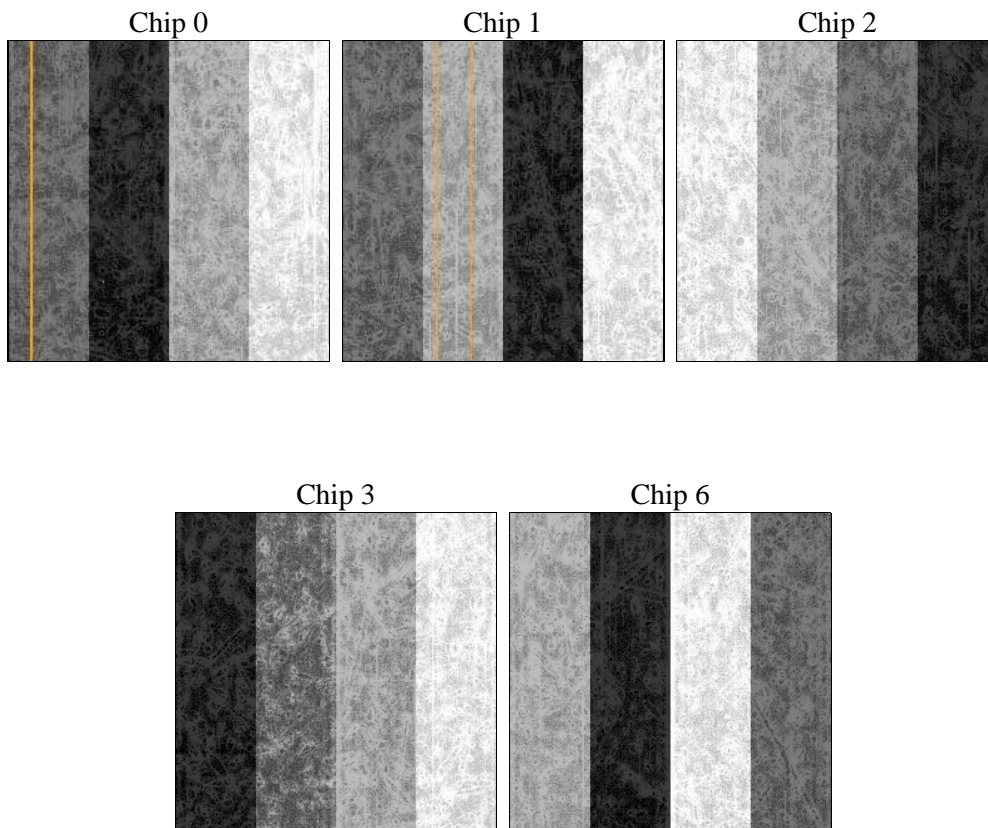
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	35000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	35035.284920871	Sum of GTIs [s]
caldbver	4.4.10	&#160	ontime0	35038.302771151	Sum of GTIs [s]
date	2012-06-11T15:34:44	Date and time of file creation	ontime1	35038.343811154	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	35028.961870313	Sum of GTIs [s]
			ontime3	35035.284920871	Sum of GTIs [s]
			ontime6	35038.261731148	Sum of GTIs [s]
			l1events	1514721	Number of level 1 events

### 2.1.4 Events

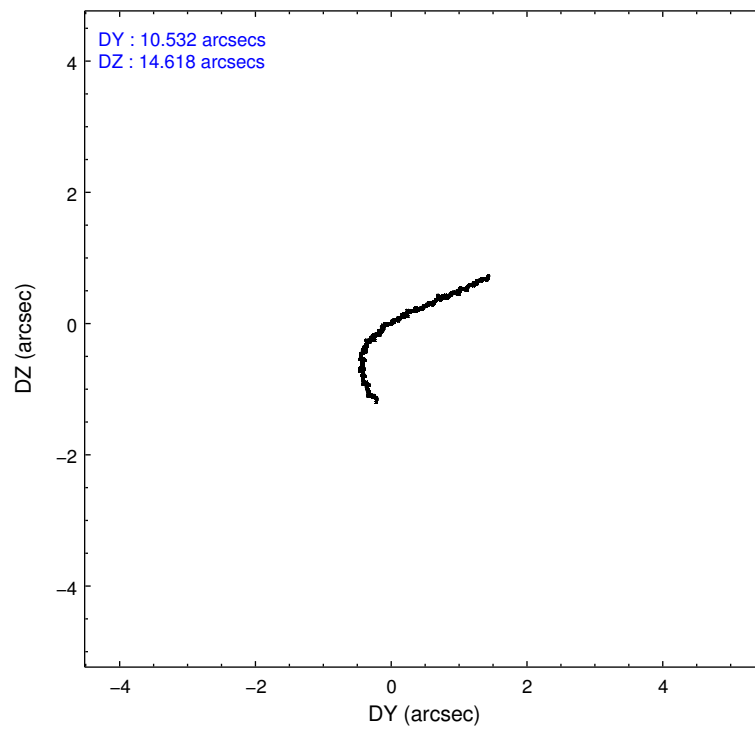
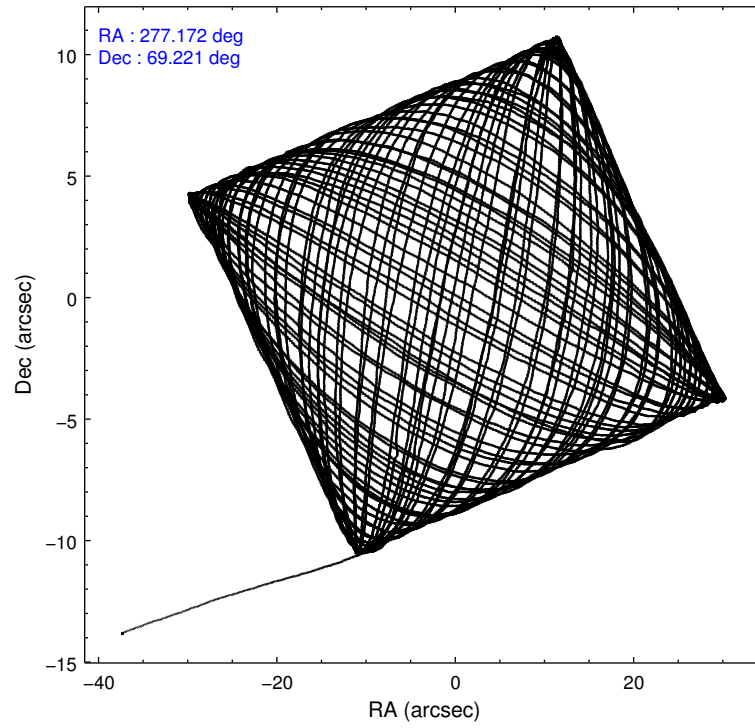
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	290615	287243	316015	314403	306445
rejected events	259089	252152	285185	278378	274882
rejected %	89%	87%	90%	88%	89%

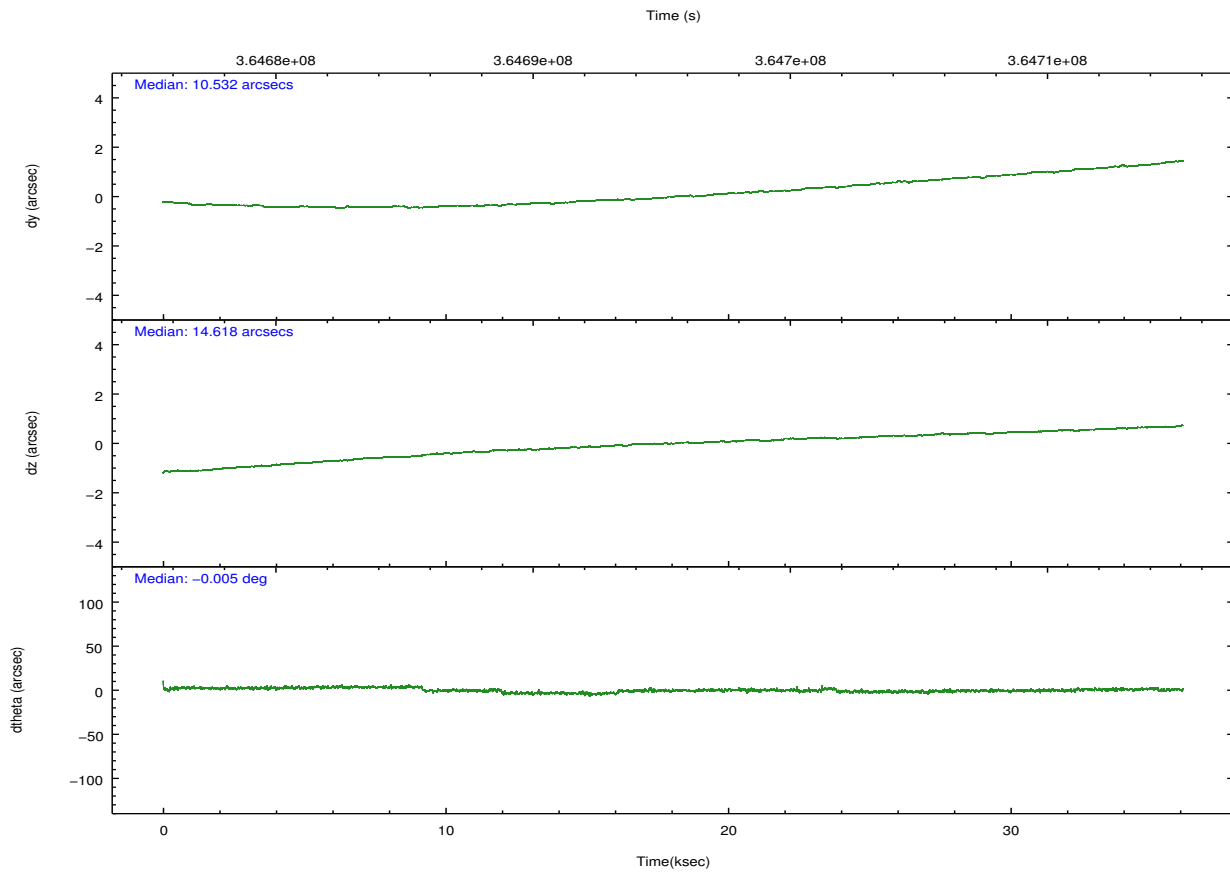
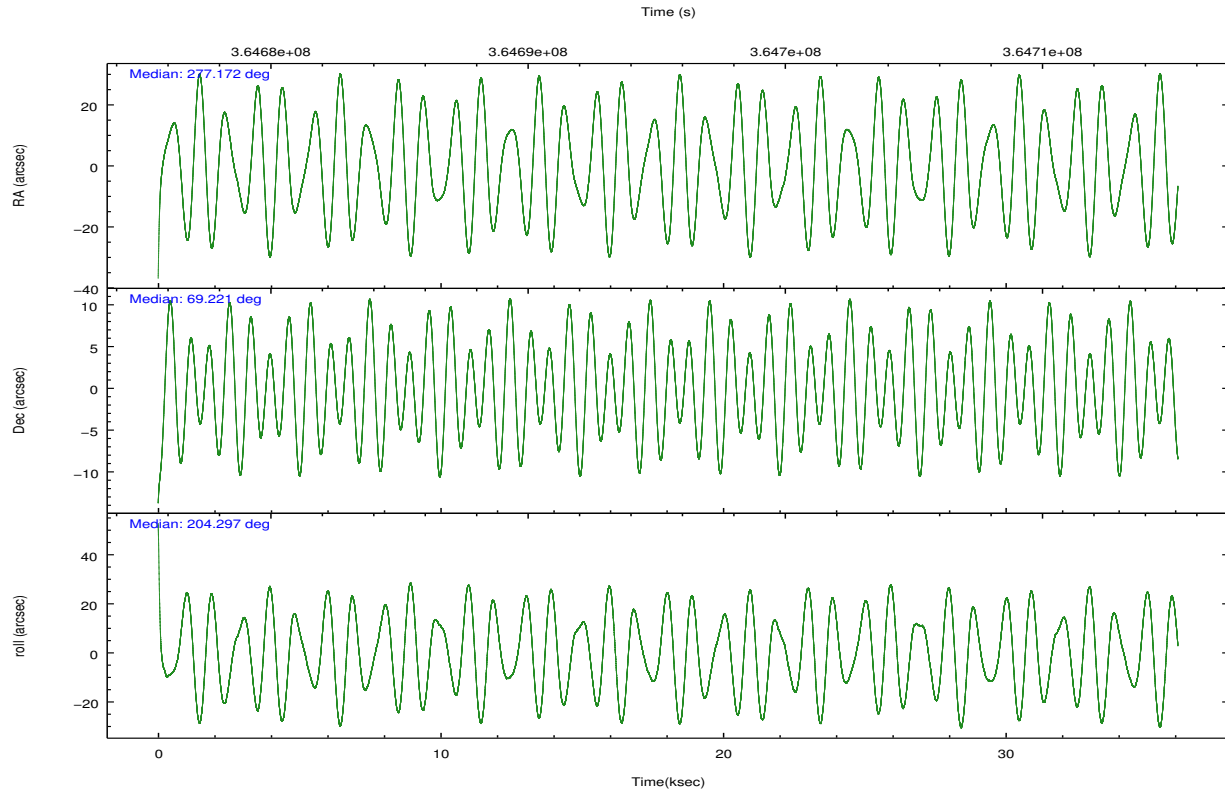
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	11028	12591	11359	15884	11114
	3%	4%	3%	5%	3%
grade 1 events	185	143	196	228	132
	0%	0%	0%	0%	0%
grade 2 events	7680	8037	7357	7219	7033
	2%	2%	2%	2%	2%
grade 3 events	3498	3741	3104	3447	3421
	1%	1%	0%	1%	1%
grade 4 events	3195	3616	3409	3426	3344
	1%	1%	1%	1%	1%
grade 5 events	11129	12202	10493	12802	12289
	3%	4%	3%	4%	4%
grade 6 events	6133	7121	5606	6053	6655
	2%	2%	1%	1%	2%
grade 7 events	247767	239792	274491	265344	262457
	85%	83%	86%	84%	85%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	277.217171	277.1721364673739	Subarray requested	NONE	NONE
[deg] Pointing Dec	69.243654	69.22124676676728	Alternating exposures requested	N	N
[deg] Pointing Roll	204.050563	204.3013632529348	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-227.592463	-227.5933067819097			
[mm] SIM translation stage offset	-6	-5.999146221020027			
[s] Observation start time (MET)	364678487.184000	364676542.10688			
Observation start date	2009-07-22T19:33:41	2009-07-22T19:02:22			
[s] Observation end time (MET)	364713487.184000	364714026.35875			
Observation end date	2009-07-23T05:17:01	2009-07-23T05:27:06			
Read mode	TIMED	TIMED			

## 2.3 Aspect



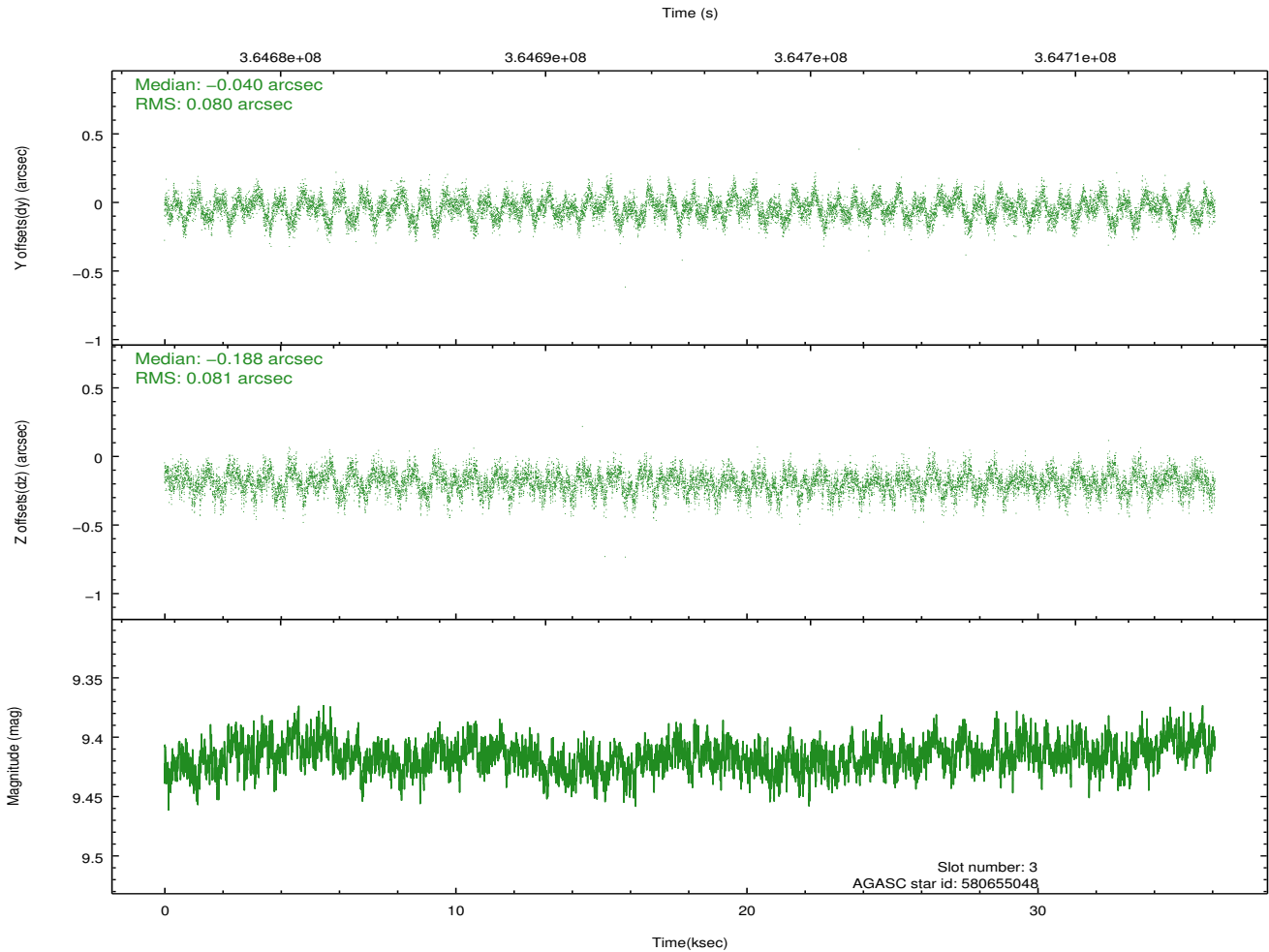
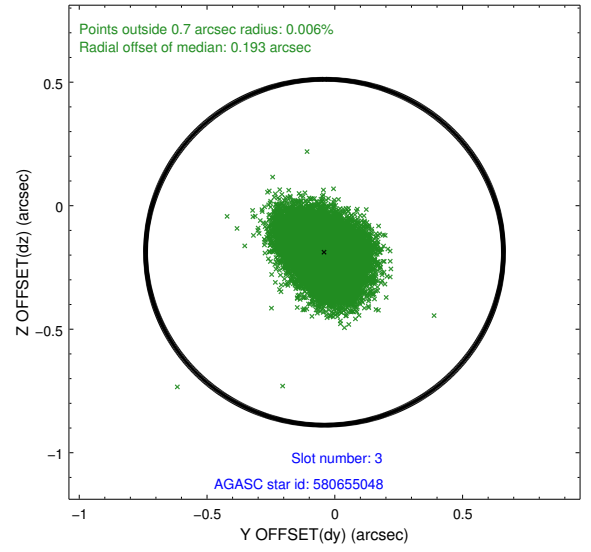
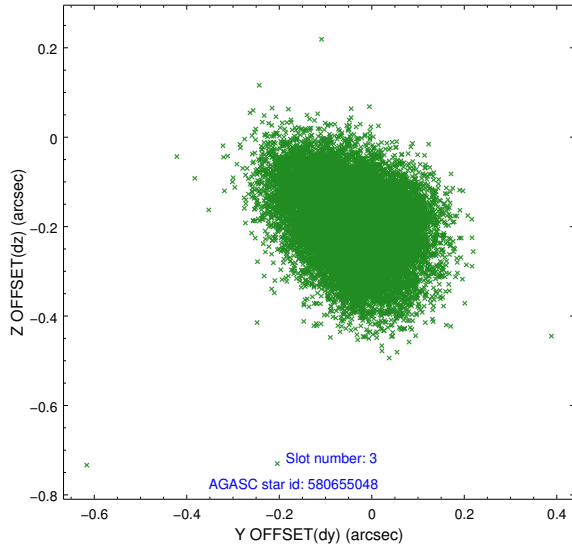


### Slot Statistics

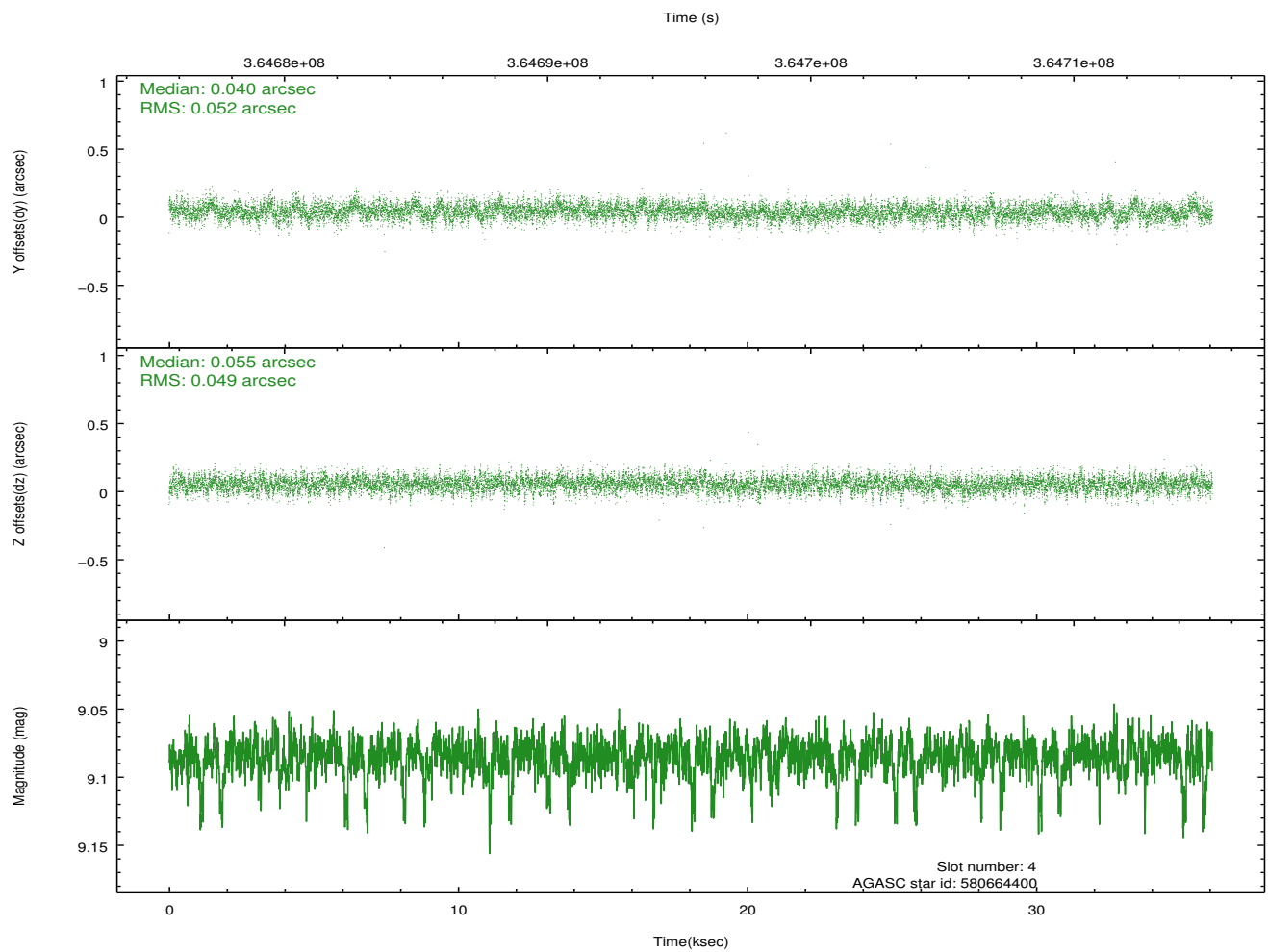
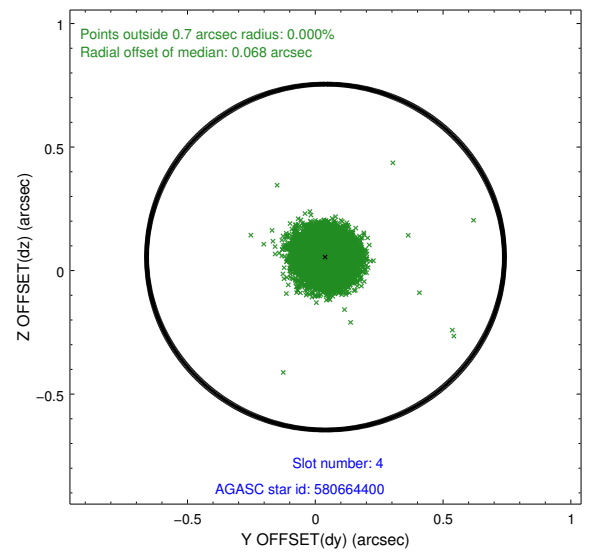
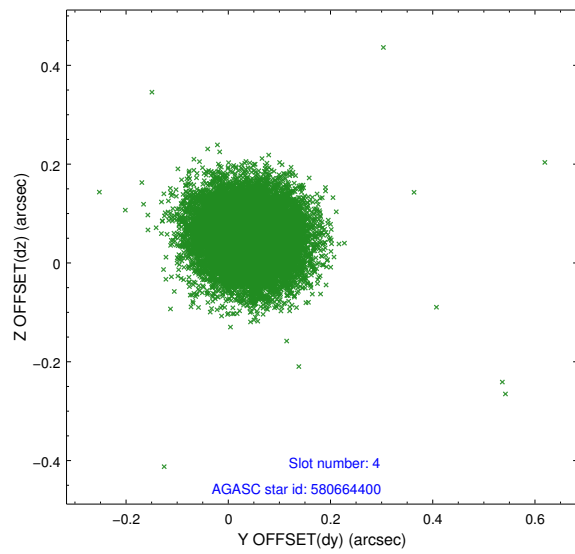
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	7.03	8800	0.078	-0.041	0.029	0.065	0.000000	0.000000	928.89	-961.26
1	FID	ACIS-I-2	6.97	8802	-0.202	0.009	0.020	0.034	0.000000	0.000000	-765.78	-966.94
2	FID	ACIS-I-4	6.94	8801	0.024	0.103	0.020	0.030	0.000000	0.000000	2148.27	939.48
3	GUIDE	580655048	9.42	17594	-0.040	-0.188	0.122	0.196	278.255648	69.000054	-870.56	1336.29
4	GUIDE	580664400	9.08	17580	0.040	0.055	0.075	0.123	276.105004	69.097914	1513.47	-114.33
5	GUIDE	581186352	8.75	17595	0.010	-0.039	0.075	0.120	276.636498	69.716978	-33.71	-1854.82
6	GUIDE	581188256	9.24	17584	-0.017	0.013	0.094	0.148	277.950616	69.909989	-1807.76	-1826.09
7	GUIDE	581188576	8.99	17594	0.012	0.161	0.087	0.147	278.376686	69.487105	-1698.35	-216.89

## 2.4 Star Slots

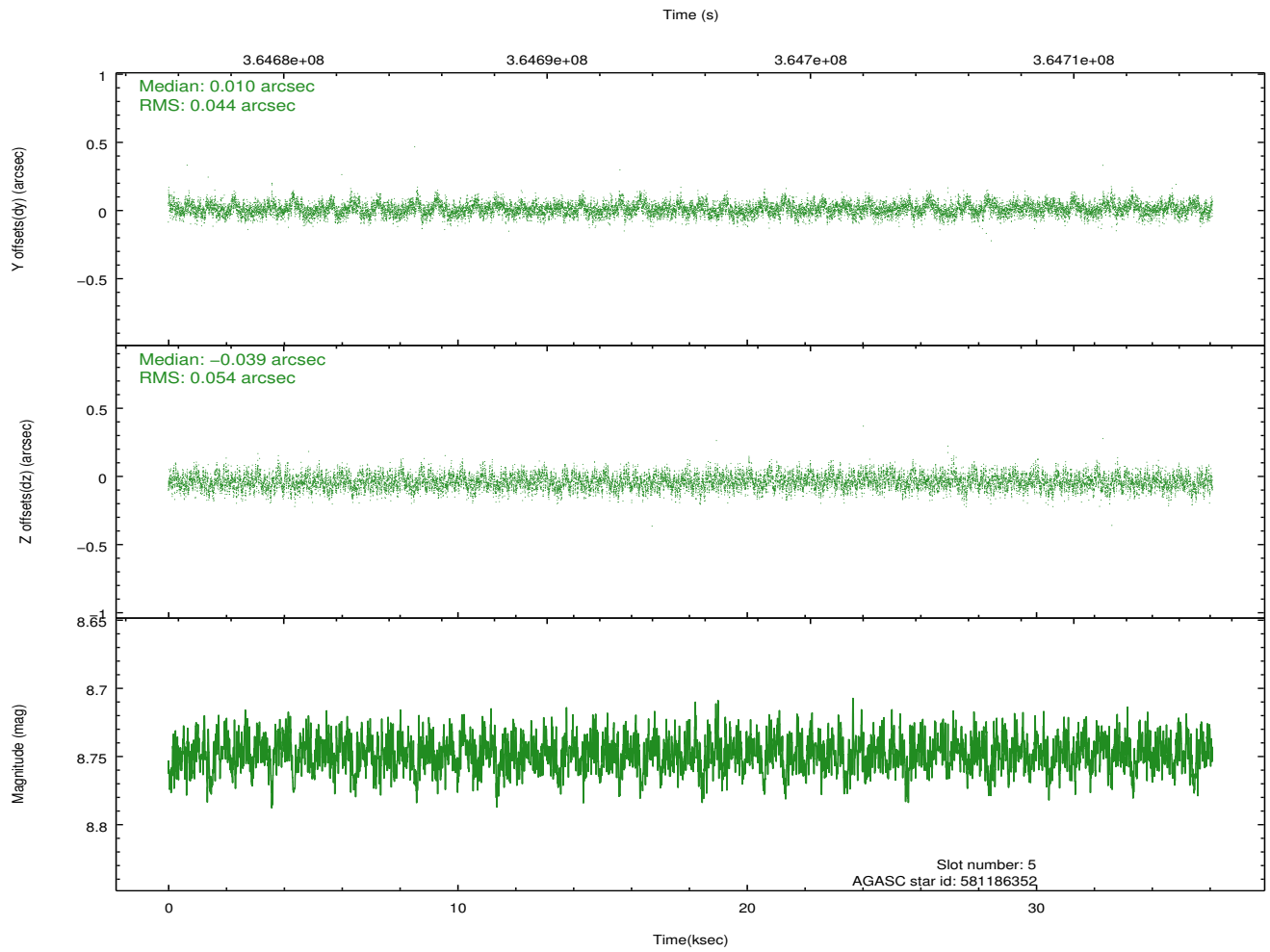
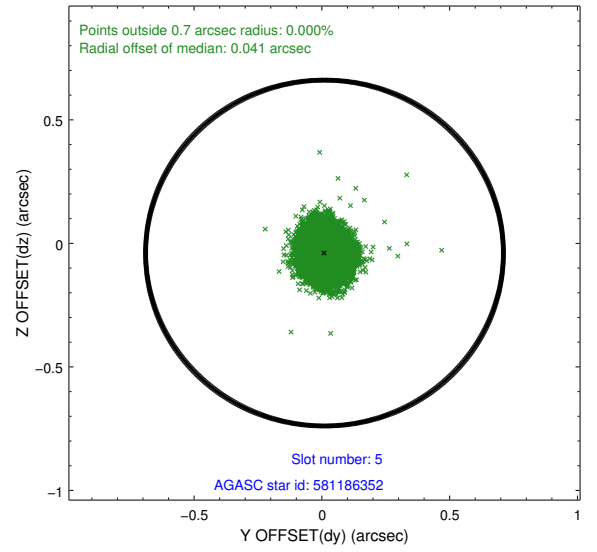
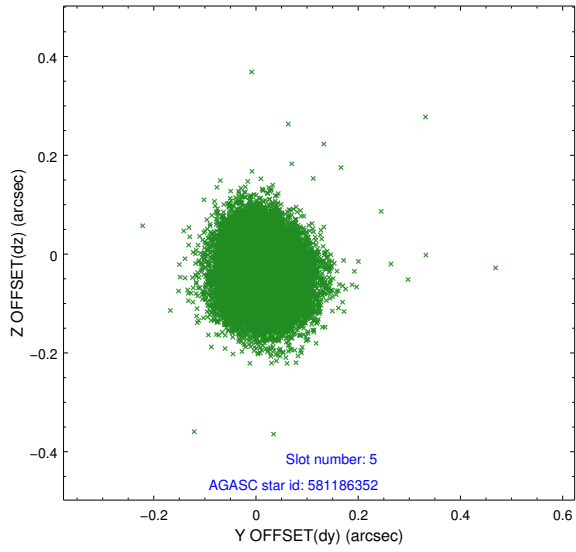
### 2.4.1 Slot 3



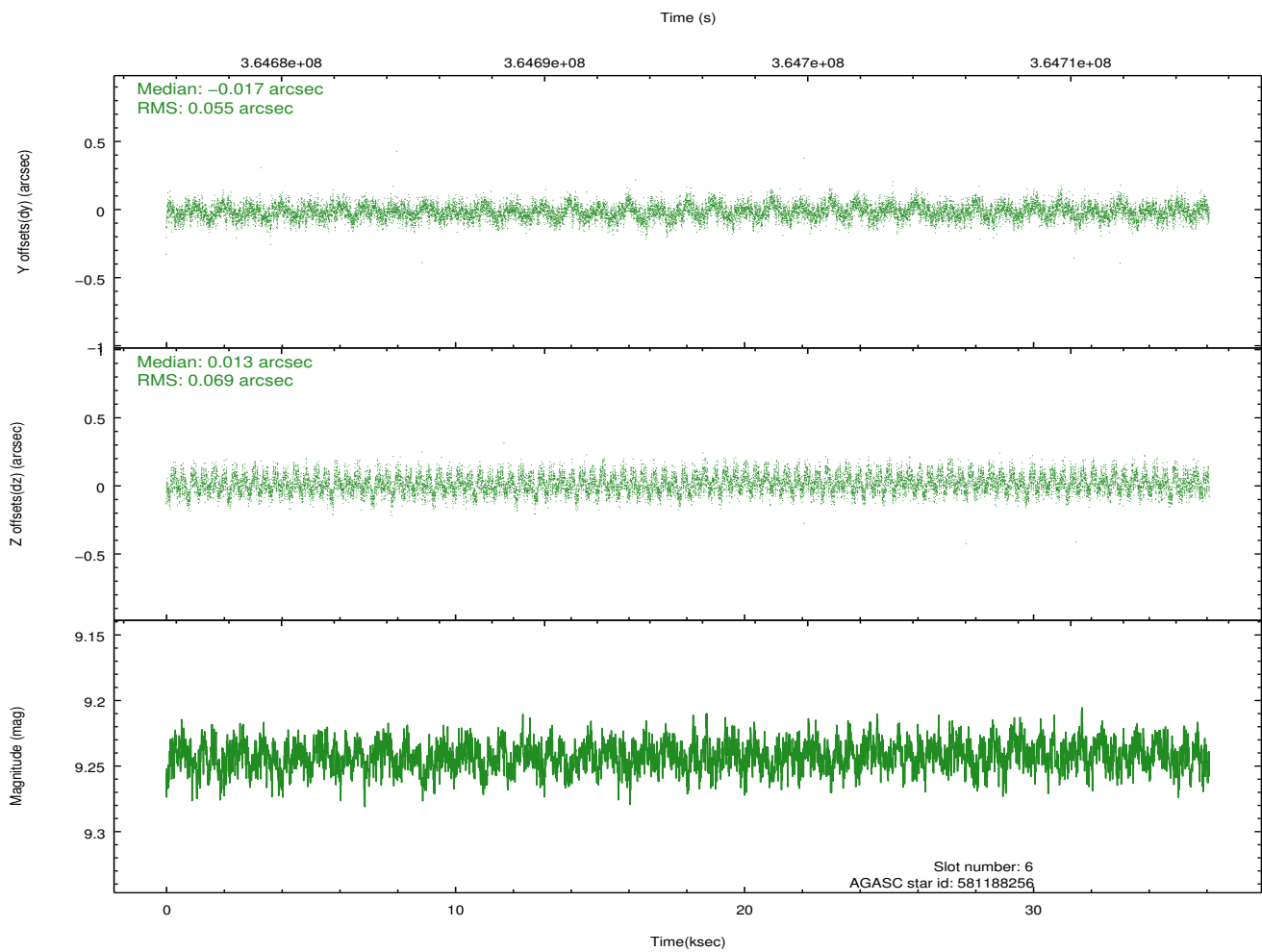
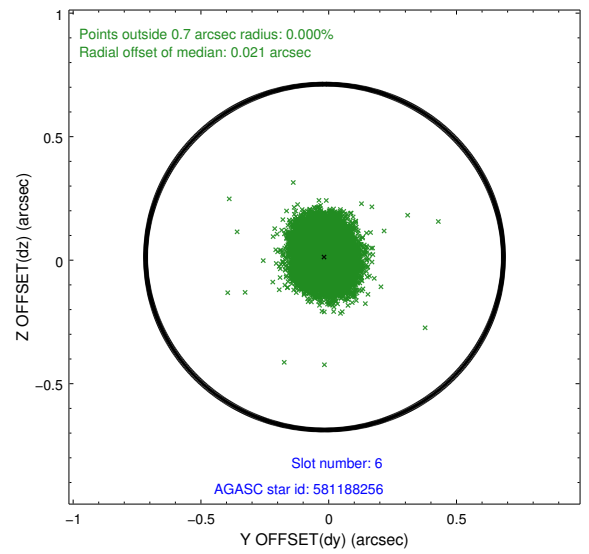
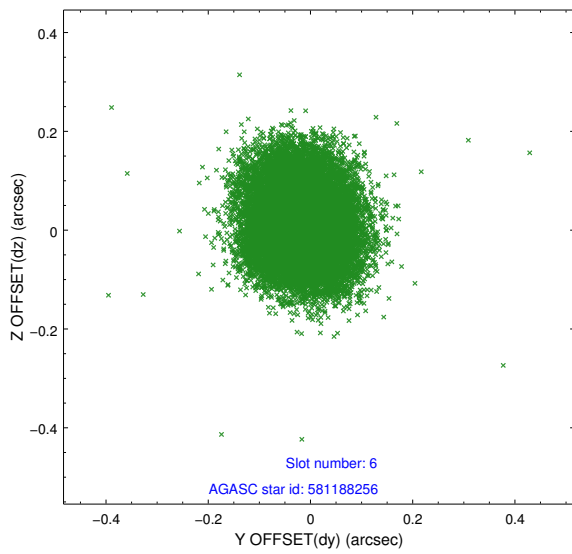
## 2.4.2 Slot 4



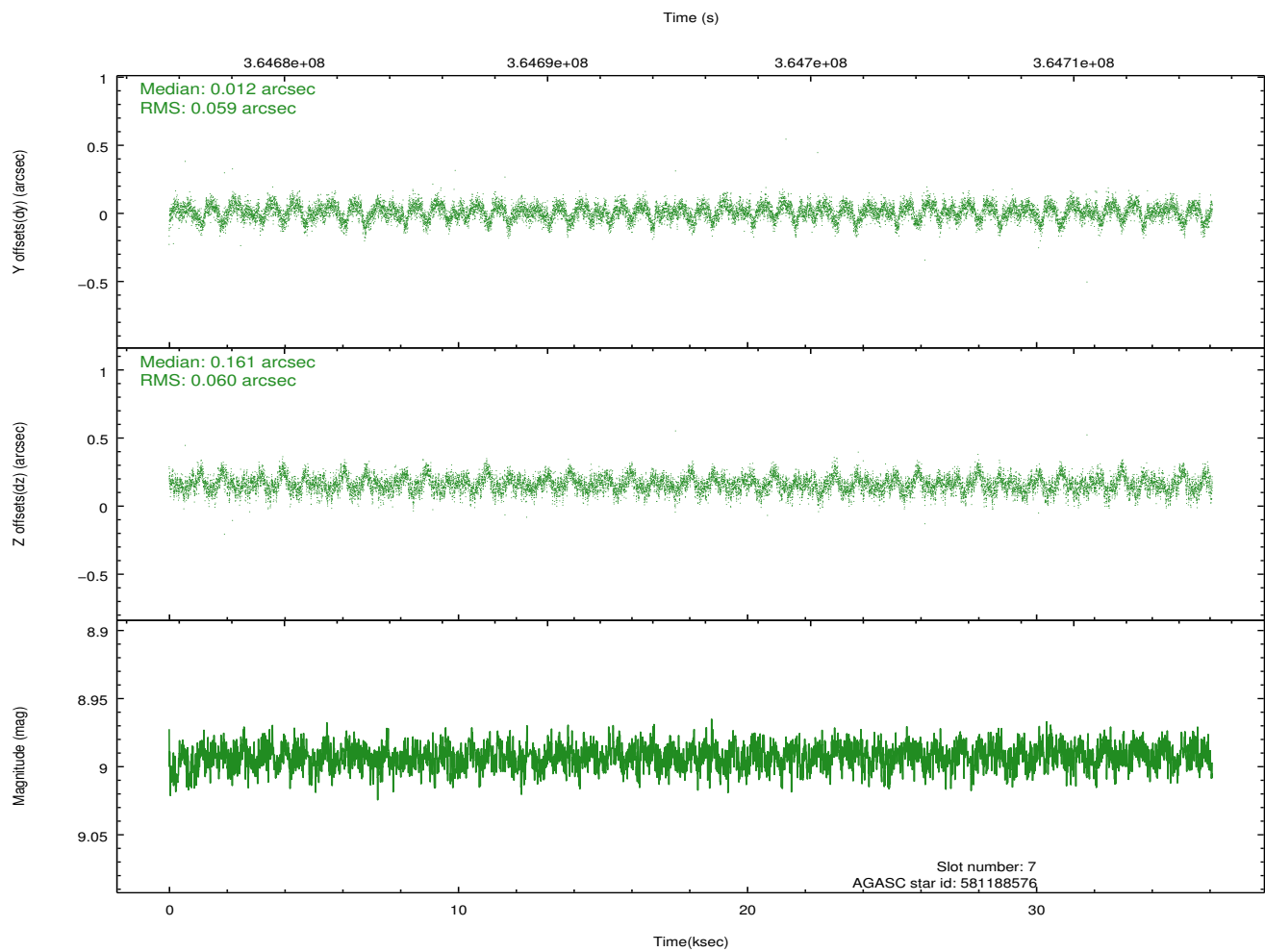
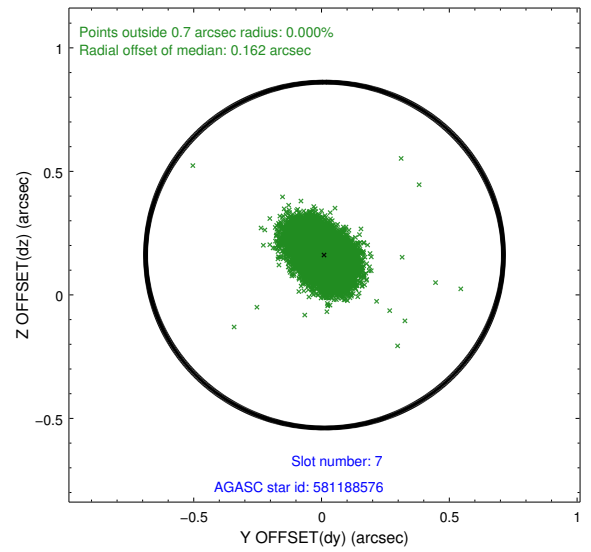
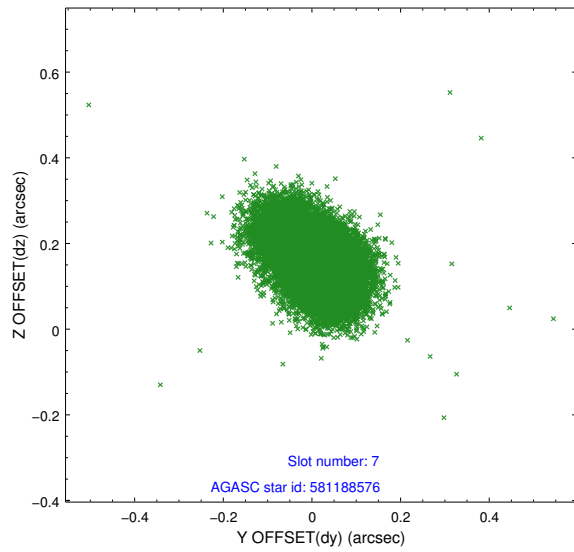
### 2.4.3 Slot 5



## 2.4.4 Slot 6

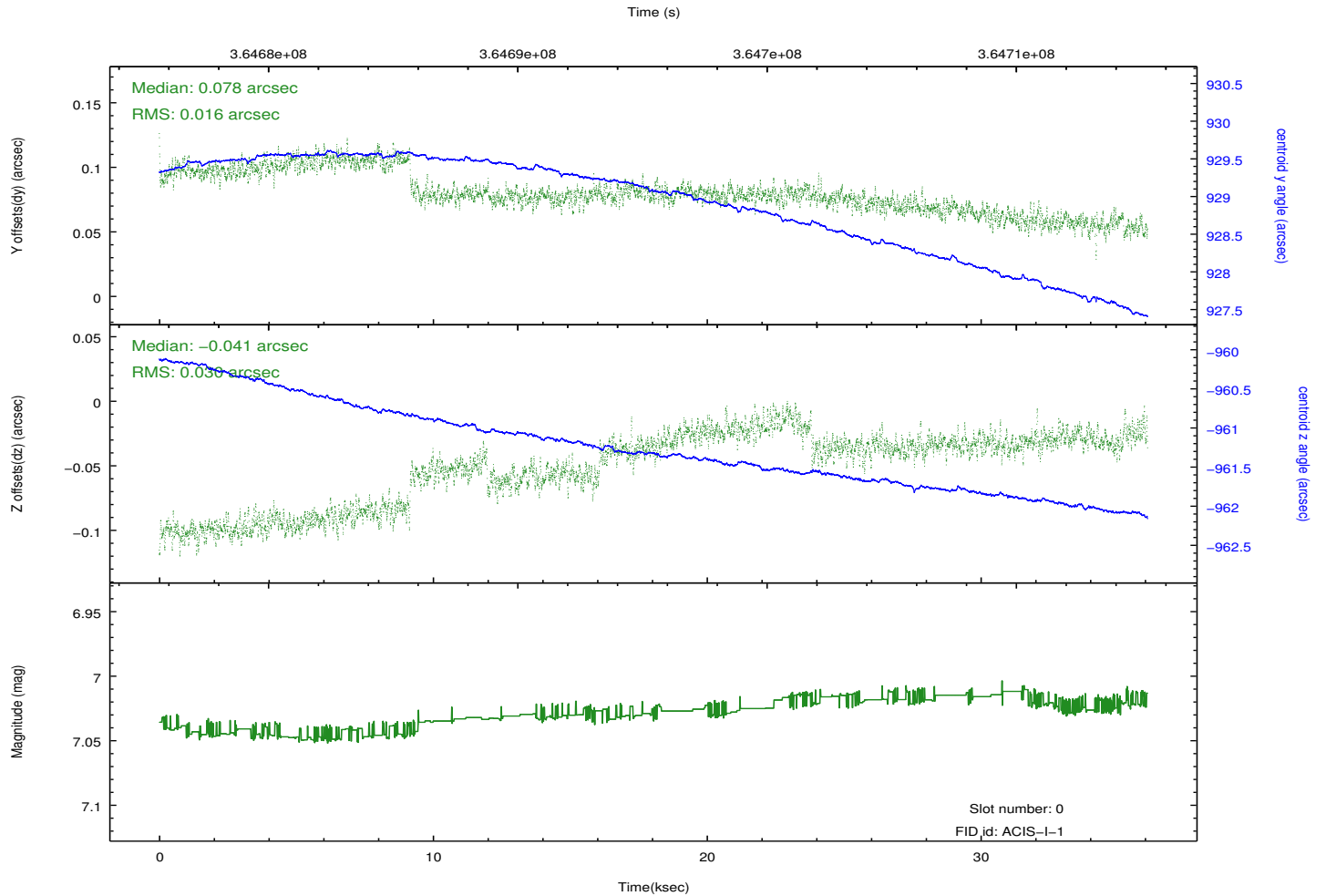
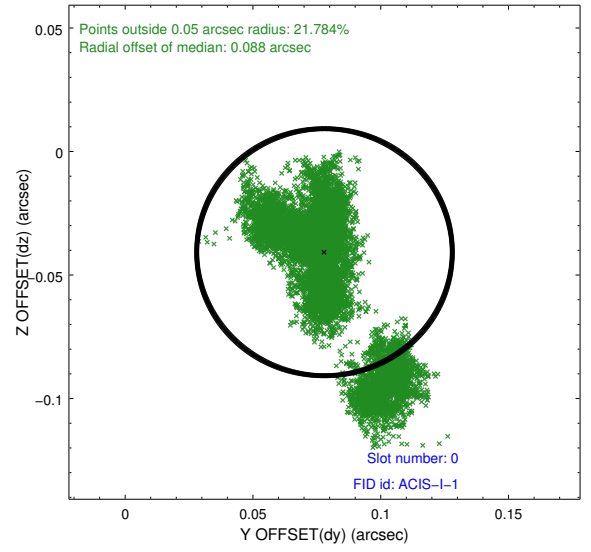
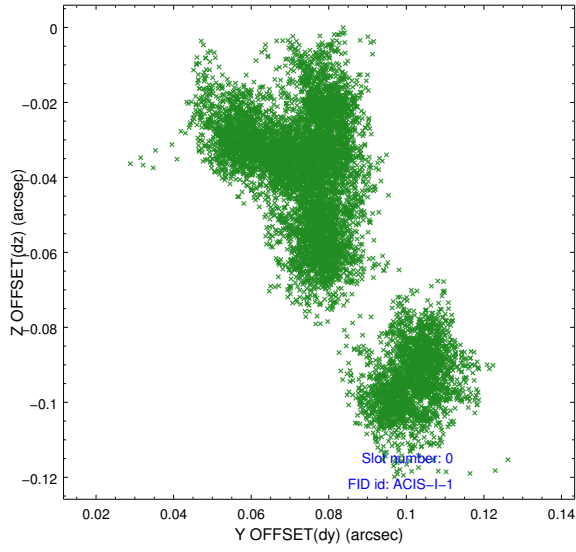


## 2.4.5 Slot 7

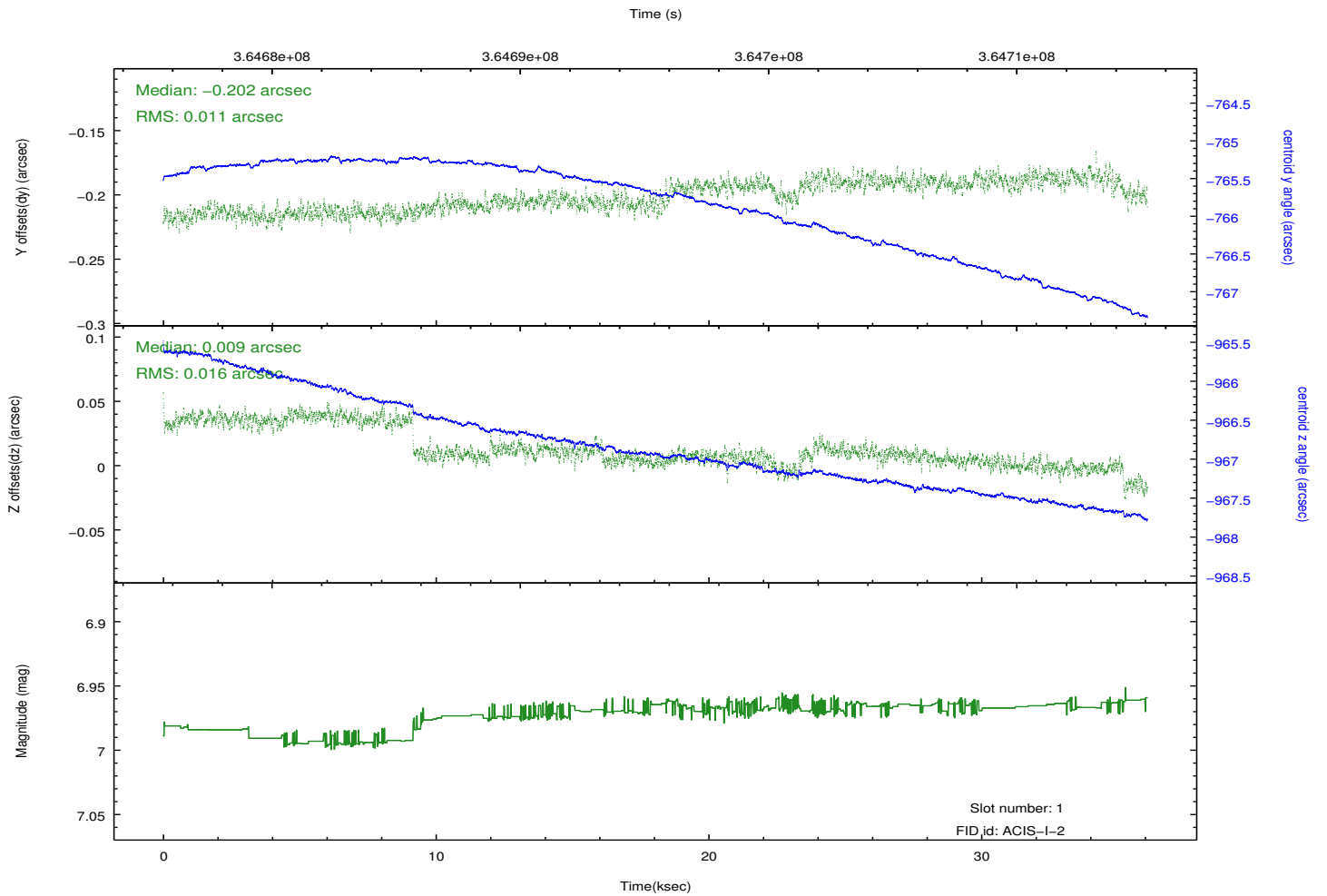
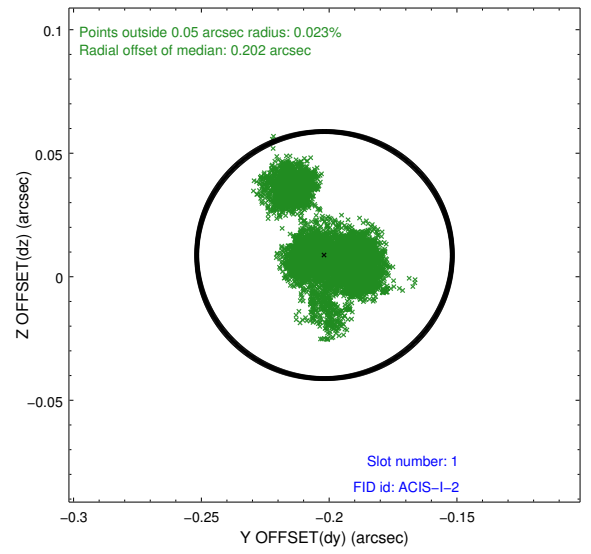
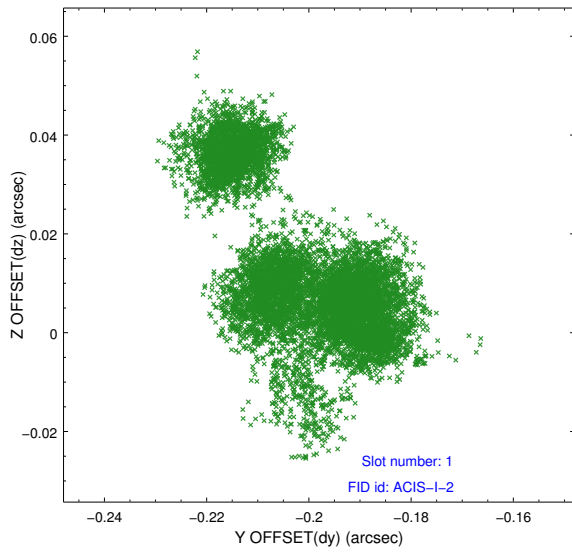


## 2.5 FID Slots

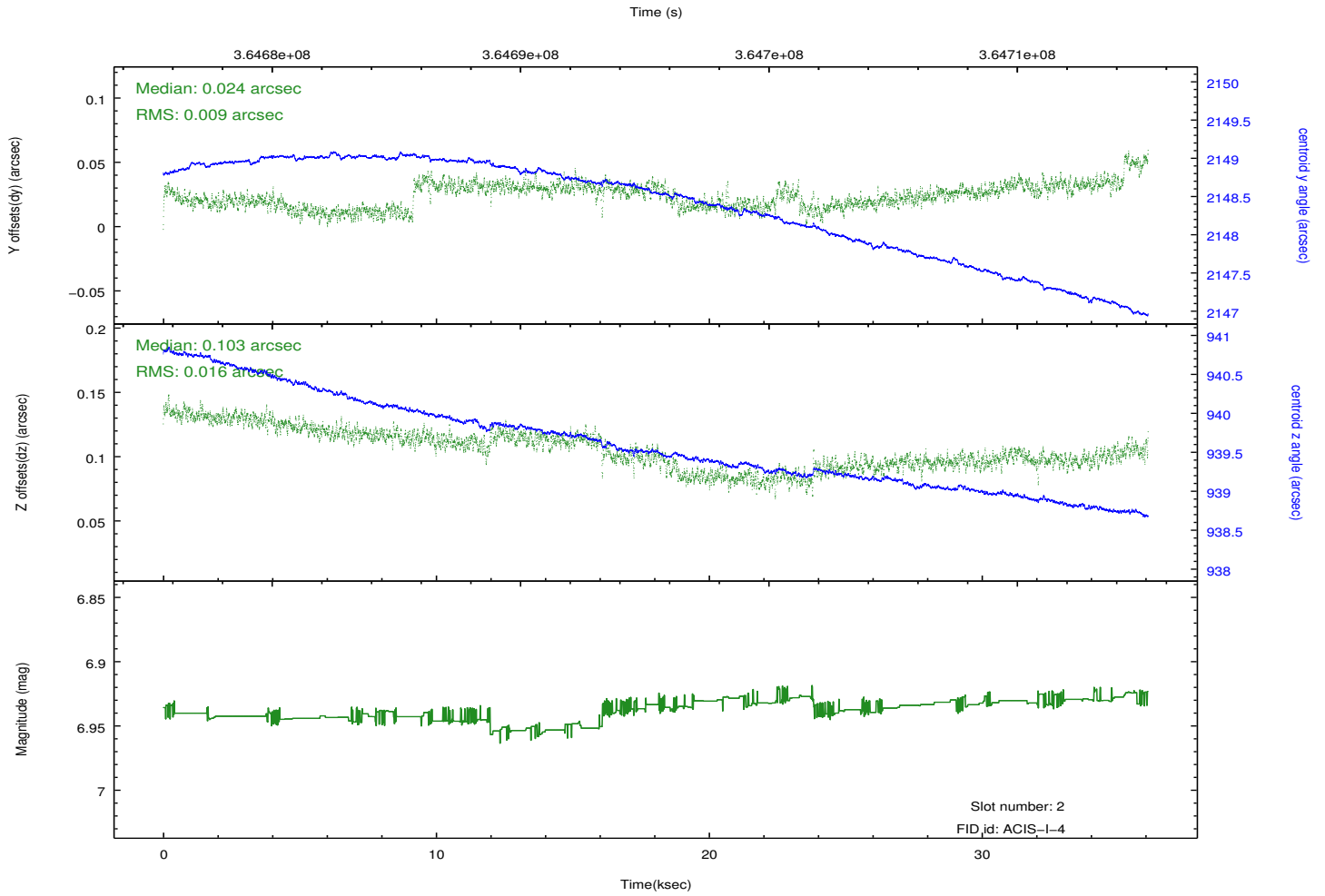
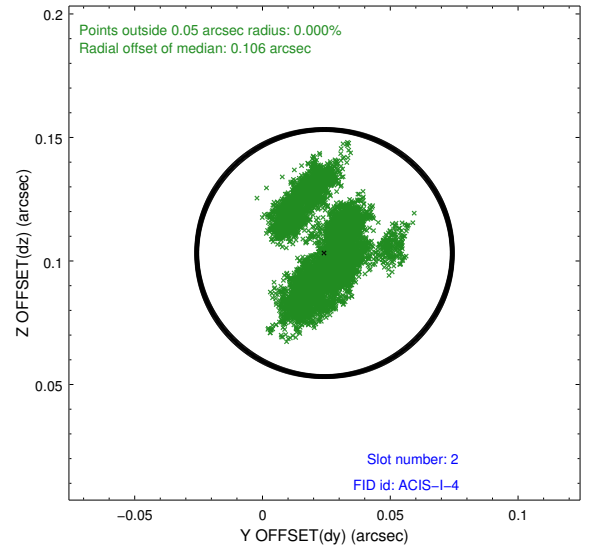
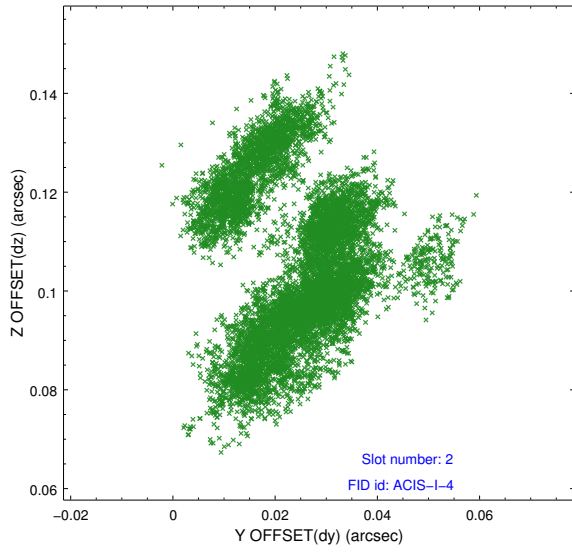
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2012.06.14
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	35.036159299135

## A.2 Comments

A spatial region of the original bias map for CCD = 2 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small ( $\sim 20$  eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 2 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords:  
(276.80979,69.15750), (276.81268,69.15527), (277.16987,69.21305), (277.16700,69.21528)